

What is claimed is:

1. A brush of a rotary electric machine to be in contact with a commutator, said brush comprising:

a brush element having a contact surface at an end thereof to be in contact with said commutator, a side and a prescribed length in a longitudinal direction thereof, said brush element including a high-conduction member having a side surface on said side and extending in said longitudinal direction and a low-conduction member bonded to a side surface of said high-conduction member; and

a pigtail extending from said side of said brush element, said pigtail having a wire end embedded in said brush element; wherein

said low-conduction member is a thin layer extending in said longitudinal direction from said contact surface to the middle of said length of said brush element; and

said wire end of said pigtail is embedded in said high conduction member at said side surface on the side of said low-conduction member remote from said contact surface.

2. A brush of a rotary electric machine to be in contact with a commutator, said brush comprising:

a brush element having a contact surface at one end thereof to be in contact with said commutator, a side and a prescribed length in a longitudinal direction thereof, said brush element

including a high-conduction member extending in said longitudinal direction and a low-conduction member bonded to said high-conduction member; and

a pigtail extending from said side of said brush element, said pigtail having a wire end embedded in said brush element; wherein

said low-conduction member is a thin layer extending in said longitudinal direction from said contact surface to the middle of said length of said brush element; and

at least a half of the peripheral portion of said pigtail is embedded in said high-conduction member on the side of said low-conduction member remote from said contact surface.3.

3. The brush as claimed in claim 1, wherein said brush is applied to a rotary electric machine having a pair of positive brushes and a pair of negative brushes to be in contact with a commutator.

4. The brush as claimed in claim 1, further comprising a boundary layer of mixture of powders of said low-conduction member and high-conduction member between said low-conduction member and said high-conduction member bonded to each other,

5. A method of manufacturing a brush element as claimed in claim 1, comprising the steps of:

forming said high-conduction powder into a stair shape

having lower step and higher steps;

adding a low-conduction powder to said lower step to be flush with said higher step;

pressing and hardening both said low-conduction and high-conduction powders to form a mold; and
sintering said mold.

6. The method as claimed in claim 5, wherein said forming step comprises the steps of: filling said high-conduction powder into a female die to form a flat surface, and scraping said flat surface from said contact surface to the middle of said length.

7. The method as claimed in claim 5, wherein said forming step comprises the steps of: filing said high-conduction powder into a female die to form a flat surface and a step of adding another high-conduction powder to said flat surface from said contact surface to the middle of said length.

8. A method of manufacturing a brush as claimed in claim 1, comprising the steps of:

forming a low-conduction powder into a flat layer of a prescribed thickness extending from said contact surface to the middle of said length;

adding a high-conduction powder to said female die to cover said low-conduction powder and extend over said length;

pressing and hardening both said low-conduction powder
and said high-conduction powder to form a mold; and
sintering said mold.

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